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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/828,530 | 04/06/2004 | Laszlo J. Kecskes | ARL 03-60 | 4322 |
| 21364 7590 10/29/2007 U S ARMY RESEARCH LABORATORY ATTN AMSRL CS CC IP 2800 POWDER MILL RD ADELPHI, MD 207831197 | | | EXAMINER WYSZOMIERSKI, GEORGE P | |
| | | | ART UNIT 1793 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/828,530

Applicant(s)

KECSKES ET AL.

Examiner

George P. Wyszomierski

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/21/07 (RCE, Amendment).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. The Request for Continued Examination, fee, and amendment filed August 21, 2007 are considered proper and have been entered. Claims 1-39 are pending in this application.

2. *Claim Interpretation*-- Claim 35 recites a feature that is "preferably" present in the claimed alloy material. The examiner will give this claim its broadest reasonable interpretation, i.e. will not read this claim as limited to the preferable embodiments.

3. Claims 34-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what the scope is of claim 34 or of any claim dependent upon claim 34. The general formula in line 2 of claim 34 would appear to require the presence of hafnium, copper, nickel and aluminum. However,

a) Line 5 of this claim appears to indicate that Al is an optional element, provided that hafnium, copper and nickel are eutectically combined with at least one of Al, Ti, or Nb.

b) Dependent claim 35 then states that the alloy comprises hafnium, copper and nickel, implying that some embodiment of the independent claim would not comprise all of these elements.

c) Claims 36-39 state that "[T]he alloy" is in eutectic combination with various other elements, but this does not seem to accurately define the invention. Rather, from reading the specification, it appears that the hafnium, copper and nickel are in eutectic combination with the element(s) listed in the dependent claims.

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d) In claim 37, it is unclear how "Ti and Nb" could be present without "a combination thereof" inherently being present.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6, 9, 11-15, 28, 30, 31, and 34-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Gu et al. Journal of Non-Crystalline Solids article (reference A5 on the IDS filed April 6, 2004).

Gu disclose a bulk metallic glass including (from page 79 and Table 1 of Gu) some combination of Hf, Zr, Ni, Al and Ti. The examiner's position is that if "x" in the formula of Gu is equal to approximately 0.8, then an alloy according to the instant claims would be produced. The Gu alloys have a density and a ratio of glass transition temperature to melting temperature as recited in the instant claims. Gu discloses making samples of the prior art alloys that are 3 mm in their smallest dimension by arc melting and suction casting.

Gu does not disclose any specific example that meets all of the compositional limitations as presently claimed, i.e. Gu does not disclose an example where "x" is 0.8, and does not teach the various eutectic combination(s) stated or implied by instant claims 28 and 34-39. The examiner's position is that page 79, Table 1, and Figs. 2 and 3 of Gu disclose sufficient information to one of skill in the art that all values of "x" between 0 and 1 would fall within the purview of Gu, including those values which would result in the presently claimed alloy compositions.

Thus, a prima facie case of obviousness is established between the disclosure of Gu et al. and the presently claimed invention.

6. Claims 1-39 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 152-160 of copending Application No. 10/946,132.

Although the conflicting claims are not identical, they are not patentably distinct from each other because both the instant claims and the '132 claims are directed to a metallic glass composition, preferably the eutectic Hf-base composition as recited in instant claims 16, 28, 29 and 34. While the instant claims are broader in scope than the '132 claims and recite some properties not specified in the '132 claims, the properties as claimed would appear to be material properties of a given composition. Therefore, from the disclosure of the specific composition in the '132 claims, one of skill in the art would believe that the attendant properties of that composition are the same in either instance.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. The papers filed with this RCE on August 21, 2007 include a declaration under 37 CFR 1.132 by inventor Laszlo J. Kecskes. The examiner agrees that the statements in that declaration, combined with information in the specification as originally filed, indicate that the substitution of Hf for Zr creates unexpected and/or unpredictable results in metallic glass alloys. Thus, the previous rejections based upon the Wolter or Xing references (which disclose only Zr embodiments) are withdrawn. A new ground of rejection of some of the instant claims has been entered supra, based upon a reference which explores the effects of substitution of Hf for Zr.


With regard to the obviousness-type double patenting rejection, Applicant states that the products defined in the '132 claims could not be fabricated using the methods described in the current application. Nonetheless, the examiner's position is that given the claims of the '132 application, particularly the specific alloy compositions defined in claims 158-160 of that application, the presently claimed invention would have been easily envisioned by one of ordinary skill in the art. It is noted that this is a provisional rejection, and would be withdrawn in the event that the conflicting claims of the '132 application are canceled.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. All patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


GEORGE WYSZOMIERSKI
PRIMARY EXAMINER
GROUP 1700

GPW
October 25, 2007